The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1.   A method comprising:

5   a)   exposing a digital image sensor comprising an array of photosites to a test card;

     b)   comparing an image signal generated by one or more of the photosites in the array, based on the exposure to the test card, to a threshold value; and

     c)   generating a profile of the digital image sensor based on the comparison.

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2.   The method of Claim 1, wherein a generated profile comprises status information of the photosites in the array.

3.   The method of Claim 2, further comprising storing the generated profile in 15   memory associated with the digital image sensor.

4.   The method of Claim 3, further comprising repeating the steps of exposing and comparing for one or more additional test cards.

20   5.   The method of Claim 4, wherein the digital image sensor is a monochrome device and the test cards are a shade value.

6.   The method of Claim 4, wherein the digital image sensor is a color device and the test cards are different base colors.

7.   The method of Claim 6, wherein the test cards comprise a red test card, a

5   green test card, and a blue test card.

8.   The method of Claim 4, further comprising:

recording an image by the digital image sensor; and

adjusting the recorded image according to the stored profile and a compensation

10   algorithm.

9.   The method of Claim 8, wherein adjusting the value assigned to a malfunctioning photosite interpolates the values of adjacent photosites.

15   10.   The method of Claim 8, wherein the status information for a photosite indicates if the photosite is inoperable, and

wherein adjusting comprises determining an average value of pixels surrounding a pixel corresponding to a photosite determined to be inoperable, and assigning the average value to the pixel that corresponds to the inoperable photosite.

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11.   A computer program product comprising:

a first component for receiving an image signal generated by a digital image sensor comprising an array of photosites after exposure to a test card;

a second component for comparing the received image signal to an expected image signal result for the one or more of the photosites for the test card; and

a third component for generating a profile of the digital image sensor based on the comparison.

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12.   The product of Claim 11, wherein a generated profile comprises status information of the photosites in the array.

13   The product of Claim 12, further comprising a fourth component for

10   storing the generated profile in memory of the digital image sensor.

14   The product of Claim 13, further comprising a repeating component for repeating the function performed by the first through fourth components for different test cards.

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15.   A computer program product comprising:

a first component for recording an image by a digital image sensor comprising an array of photosites, wherein the digital image sensor includes a profile of the operable status of the photosites;

20   a second component for adjusting the recorded image according to the profile and a compensation algorithm.

16.   The product of Claim 15, wherein the second component comprises determining an average value of pixels surrounding a pixel corresponding to a photosite with inoperable status information, and entering the determined average value as the value for the pixel that corresponds to the inoperable photosite.

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17.   A system comprising:

one or more test cards;

a digital image sensor comprising an array of photosites;

an image processor for comparing an image signal generated by one or more of

10   the photosites in the array of the digital image sensor, based on exposure of the sensor to one of the one or more test cards, to a threshold value, and for generating a profile of the digital image sensor based on the comparison.

18.   The system of Claim 17, wherein a generated profile comprises status

15   information of the photosites in the array.

19.   The system of Claim 18, wherein the sensor further comprises memory for storing the generated profile.

20   20.   The system of Claim 19, wherein the image processor generates a profile by comparing an image signal generated by all the photosites when exposed to all the test cards.

21. The system of Claim 20, wherein the digital image sensor is a monochrome device and the test cards are a shade value.

22. The system of Claim 20, wherein the digital image sensor is a color device and the test cards are different base colors.

23. The system of Claim 22, wherein the test cards comprise a red test card, a green test card, and a blue test card.

24. The system of Claim 20, wherein the digital image sensor records an image, and adjusts the recorded image according to the stored profile and a compensation algorithm.

25. The system of Claim 24, wherein the digital image sensor adjusts by interpolating the value assigned to a malfunctioning photosite by interpolating the values of adjacent photosites.

26. The system of Claim 24, wherein the status information for a photosite indicates if the photosite is inoperable, and

wherein the digital image sensor adjusts by determining an average value of pixels surrounding a pixel corresponding to a photosite determined to be inoperable, and by assigning the average value to the pixel that corresponds to the inoperable photosite.